

R E M A R K S

The last Office Action has been carefully considered.

It is noted that claims 19 - 21 are rejected under 35 U.S.C. 102 or 103 over the patent to Albert.

Claims 22, 23 and 25 are rejected under 35 U.S.C. 103 over the patent to Albert in view of the patent to Millenaar.

Claims 20, 21 and 26 - 28 are rejected under 35 U.S.C. 112, second paragraph and the specification is objected to.

It is believed to be advisable before the analysis of the prior art to analyze the formal objections and rejections.

In connection with the Examiner's rejection of the claims based on his objection to the term "lining" in claim 20, the Examiner's objection is respectfully accepted and it is proposed to change the term "lining" to the term --frame -- which more clearly describes the nature of the part

in question. The specification and the claims have been amended correspondingly, and the Examiner is respectfully requested to approve the proposed changes.

Claim 28 has been cancelled and claim 26 has been amended to define the X-ray absorbing material as required by the Examiner. The symbols in claims 24 and 26 objected in the Office Action have been amended as required by the Examiner.

In connection with the Examiner's objection to the specification, in view of the fact that the angles added to page 7 of the specification and to claims 24 and 26 are not supported by a corresponding teaching, applicant has submitted an English language text describing the cited angles as Mattsson angles. The specification has been also amended to define that the radiation absorbing layer is one-piece. It is therefore believed that the Examiner's grounds for the objection to the specification and rejection of claims 20, 21 and 26 - 28 under 35 U.S.C. 112 first paragraph should be considered as no longer tenable and should be withdrawn.

Coming now to the Examiner's rejection of the claims over the art, particularly under 35 U.S.C. 102 and 103 over the patent to Albert, applicant wishes to make the following remarks:

Claim 19 has been amended so as to more clearly distinguish the present invention from the references applied by the Examiner. Claim 19 defines in a cellular X-ray grid which has a main body ~~composed of an X-ray transmitting material and~~ having a plurality of throughgoing cells separated by a plurality of partitions, and an X-ray absorbing layer which covers all surfaces of the partitions; the main body is composed of photosensitive glass. As will be explained hereinbelow, when the main body is composed of photosensitive glass, the X-ray grid can be formed as a monolithic perforated structure or monolithic cellular grid.

Turning now to the references and in particular to the patent to Albert applied by the Examiner, it can be seen that the Albert grid is not a monolithic structure but instead a multi-layer structure. It is not composed of photosensitive glass or any other photosensitive material. Instead it is composed for example, in one alternative, of X-ray absorbing materials such as lead, tin, lead-containing or uranium-containing glass which has etched openings as disclosed in column 7, lines 27 - 60. In accordance with another alternative it can be composed of light metals such as copper or barium-copper with etched openings and subsequently applied X-ray absorbing layer on the surfaces of the etched plate, for example lead layer as disclosed in column 14, lines 18 - 30.

Still another alternative includes the device composed of light metals, or plastics which surface layers of the above mentioned metals and with etched openings, with lead layer covering its surfaces partially as disclosed in column 14, lines 35 - 60. All three alternatives of the device disclosed in the patent to Albert are produced by applying a thin photosensitive layer with a thickness of n/m or in other words photoresist, on the surface of the main material, then exposing the same with light through a mask, then developing an etching through the exposed part of the photoresist so as to produce openings, through which thereafter analogous openings in the main material are made. Since the etching is performed with the same speed in direction of the depth and width, only very thin layers with a thickness of several tenths of micrometers can be treated in this way, since otherwise the partitions will be etched out as well. Thereby the grid disclosed in the patent to Albert is composite and composed of many layers in direction of its height. For example, if it is necessary to produce the grid with a thickness of minimum 2 mm, it will contain several hundredths of micron layers.

In contrast, when the grid is composed of a photosensitive glass as in the applicant's invention, it is made as a monolithic grid. In such a monolithic structure of photosensitive glass etching is performed through the whole

depth of the structure since the irradiated or exposed portions corresponding to the openings are etched without etching of their walls. The monolithic grid produced from the photosensitive glass is characterized by substantially higher manufacturing accuracy which improves the quality of X-ray diagnostics. Its manufacture is a many hundredths times faster than the manufacture of the composite grid. It permits to provide X-ray diagnostics or treatment of substantially irradiation doses for patients and personnel. It should be noted that the cellular grid disclosed in the patent to Albert has not been implemented in practice and exists only in corresponding articles and this patent. The grid disclosed in the reference is not composed of photosensitive glass or any other photosensitive material. This feature, in particular the grid or main portion of the grid composed of photosensitive glass is not disclosed in this reference and cannot be derived from it. In order to arrive at the applicant's invention from this reference the reference has to be fundamentally modified.

In order to arrive at the applicant's invention from the references the references have to be fundamentally modified by introducing into them the new features which were first proposed by the applicant. However, it is well known that in order to arrive at a claimed invention by modifying the references, the cited art must itself contain a suggestion for

such a modification. This has been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision In re Randel and Redford, 165 USPQ 586 that:

"Prior patents are references only for what they clearly disclose or suggest; it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest."

Also, as specified hereinabove, the applicant's invention provided for highly advantageous results which cannot be obtained from the patent to Albert. It is well known that in order to support an obviousness rejection, the art must also suggest that it would accomplish applicant's results. This was stated by the Patent Office Board of Patent Appeals and Interferences in the case Ex parte Tanaka, Marushima and Takahashi, 174 USPQ 38, as follows:

"Claims are not rejected on the grounds that it would be obvious to one of ordinary skill in the art to rewire prior art devices in order to accomplish applicant's results, since there is no suggestion in the prior art that such a result could be accomplished by so modifying prior art devices."

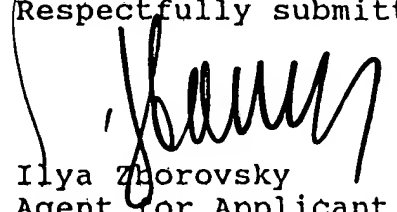
In view of the above presented remarks and Amendments it is believed that claim 19 should be considered as patentably distinguishing over the art and should be allowed.

It is respectfully submitted that claim 23 should be considered as patentable per se, since neither Albert not Millenar has any hint or suggestion that the cells can be vacuumed.

Reconsideration and allowance of the present application are most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 516-243-3818).

Respectfully submitted,


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